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002/005

DEC 18 2007

67,036,025; B05755/5756

IN THE CLAIMS

1. (Previously Presented) A method of facilitating power transfer between a main engine and an auxiliary power unit (APU), comprising:

obtaining a main engine generator frequency;

determining a target APU speed that will generate an APU generator frequency that is the same as the main engine generator frequency;

adjusting an actual APU speed to the target APU speed;

conducting the power transfer between the main engine and the APU;

determining an APU rate limit, wherein the step of adjusting the actual APU speed includes keeping an adjustment rate below the APU rate limit; and

the adjustment of said actual APU speed is taken to occur rapidly, but without exceeding said APU rate limit.

2. (Original) The method of claim 1, wherein the step of determining the target APU speed comprises checking a look-up table linking a plurality of APU frequencies with a plurality of corresponding target APU speeds.

3. (Cancelled)

4. (Previously Presented) The method of claim 1, wherein the APU rate limit is determined based on at least one fuel schedule.

5.-7. (Cancelled)

8. (Original) The method of claim 1, wherein the step of conducting power transfer comprises connecting the main engine and the APU to a communication bus.

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9. (Previously Presented) An engine control system that facilitates power transfer between a main engine and an auxiliary power unit, comprising:

a control unit in communication with an aircraft load management system;  
an APU controller in communication with the APU;  
a communication bus that forms a communication link between the control unit and the APU controller,

wherein the APU controller obtains a main engine generator frequency from the control unit, determines a target APU speed that will generate an APU generator frequency that is the same as the main engine generator frequency, and adjusts an actual APU speed to the target APU speed to allow power transfer between the main engine and the APU, and the APU controller determines an APU rate limit and adjusts the actual APU speed at an adjustment rate below the APU rate limit; and

the adjustment of said actual APU speed is taken to occur rapidly, but without exceeding said APU rate limit.

10. (Cancelled)

11. (Original) The engine control system of claim 9, wherein the APU controller obtains the target APU speed by checking a look-up table linking a plurality of APU generator frequencies with a plurality of corresponding target APU speeds.

12. (Cancelled)

13. (Previously Presented) The engine control system of claim 9, wherein the APU controller determines the maximum APU load by checking a look-up table linking the target APU speed with at least one main engine operating parameter.

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14.-18. (Cancelled)